

### **III. REMARKS**

#### **A. Summary**

Applicant elected claims 24-27 (Species B) in a response of December 17, 2002. Claims 1-23 are withdrawn as a result of the election. Claims 24-27 are pending in the present application. No claims have been amended or canceled. As required by the Office Action (paper no. 7) at paragraph 3, page 2, amendments have been made to the specification. No new matter has been added. By this Amendment, claims 24-27 are believed to be in condition for allowance.

#### **B. Specification Objections**

Paragraph 3, page 2 of the Office action objects to the specification "as failing to provide proper antecedent basis for the claimed subject matter. . . . Correction of the following is required: There is no positive antecedent basis in the specification for the percentages of tin, tungsten and tungsten-filled polymer, and for the weight of the bullet."

Applicant has amended the specification to include the following paragraph which is detailed in the Amendment to the Specification section above.

In a preferred embodiment the bullet comprises: a jacket; a first core contained within the jacket ; and a second core contained within the jacket aft of the first core, wherein: the first core consists of at least 50 weight percent tin; and the second core consists of at least 50 weight percent tungsten. Additionally, the first core can have a deformability effective so that the bullet will not defeat level 2 body armor when impacted thereon. In another preferred embodiment the first core comprises at least 80.0 weight percent tin; the second core comprises at least 95.0 weight percent tungsten-filled polymer; and the jacket comprises at least 50.0 weight percent copper. In both preferred embodiments, the bullet can have a weight of 120-125 grains.

Support for the new paragraph can be found in the specification as filed at pages 10, line 21 to page 11, line 6 (claims 24-27). Support for the claimed invention can also be found in the specification at page 5, lines 30-32 which recites "tungsten-filled nylon resin."

In view of the above noted amendment to the specification, Applicant respectfully requests that the objection be withdrawn.

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Serial No. 10/010,009  
Dual Core Ammunition  
Inventor: Henry J. Halverson  
Attorney Docket No. 102167-200  
Alberta A. Vitale, Reg. No 41,520  
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**C. 35 USC § 112 Rejection**

Paragraph 5, page 3 of the Office Action rejects claim 25 “as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 25 is a functional claim which does not recite specific structure of the bullet which will perform the claimed function.” Applicant respectfully disagrees with the rejection. Claim 25 depends from independent claim 24 which recites structure including “a jacket; a *first core* contained within the jacket; and a second core contained within the jacket aft of the first core . . .” (Emphasis added). Claim 25, the subject of the 35 USC 112 rejection depends directly from claim 24 and recites “[t]he bullet of claim 24 wherein: the first core has deformability effective so that the bullet will not defeat level 2 body armor when impacted thereon.” (Emphasis added) Applicant notes the emphasized language of claims 24 and 25 and believes that said language provides specific structure which will perform the claimed function. Therefore, Applicant respectfully requests that the rejection be withdrawn.

**D. 35 USC § 102 and 35 USC § 103 Rejections****1. The following rejection was made under 35 USC 102(b):**

- Office Action Paragraph 8 as to Claims 24 – Anticipated by Beal, U.S. Patent No. 5,847,313 (*hereinafter* Beal ‘313).

The Office action at paragraph 8, page 4 states that “Beal discloses a jacketed bullet comprising a copper jacket 47, a tin first core 51 and a tungsten second core 49.” With respect to the elements cited in the rejection, Applicant has reviewed the Beal ‘313 reference and found that Beal ‘313 recites: “the jacketed 47 core 49 and cap 51 combination may be formed in a die 50 having an ogival cavity 52 . . . It will be apparent from FIG. 6 that the cap 51 and the leading end 56 of the core, along with the leading end 58 of the jacket 47 will be deformed as they are forced to conform to, and fill the ogival die cavity.” (col. 7, lines 42-45). However, these are

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not the same as the elements of claim 24. Furthermore, the rejection does not state any reference to the weights of the first and second cores that are recited in claim 24. Therefore, Beal '313 rejection fails to teach each and every element of claim 24 and Applicant respectfully requests that the rejection be withdrawn.

**2. The following rejection was made under 35 USC 102(e):**

- Office Action Paragraph 9 as to Claim 24 – Anticipated by either Vaughn et al. or Beal 6,371,029 (*hereinafter* Vaughn or Beal '029).

The Office action at paragraph 8, page 4 states that "Vaughn et al. disclose a jacketed bullet comprising a copper alloy jacket 15, a tin first core 10 and a tungsten second core 13." With respect to the elements cited in the rejection, Applicant has reviewed the Vaughn reference and found that Vaughn recites at paragraph 28: "a 20 grain *copper alloy jacket* could be used to produce a 140 grain 38 caliber hollow-point bullet that matched the dimensions and weight of the lead design;" and at paragraph 30: "[t]he non-lead hollow point bullet of the instant invention comprises a mixed construction slug further comprising, a monolithic metal insert 10 having a tapered (preferred conical) hollow point tip 11 and a tapered (preferred conical) tail protrusion 12, and an unsintered powdered metal composite core 13 in tandem alignment with the insert 10. The core 13 has a hollow tapered (preferred conical) cavity tip portion 14 coupled with the tapered (preferred conical) tail protrusion 12 on the insert 10. An open tip jacket 15 envelops at least a portion of the insert 10 and the core 13. The jacket 15 is swaged at the open tip." These are not the same as the elements of claim 24. Furthermore, the rejection does not state any reference to the weights of the first and second cores that are recited in claim 24. Therefore, Beal '313 rejection fails to teach each and every element of claim 24 and Applicant respectfully requests that the rejection be withdrawn.

The Office action at paragraph 8, page 4 states that "Beal ['029]. disclose a jacketed bullet comprising a copper jacket 14, a tin first core 32 and a tungsten second core 24." With respect to the elements cited in the rejection, Applicant has reviewed the Beal '029 reference and found that Beal '029 recites at col. 4, lines 32-40: a jacket 14 as follows: "one embodiment of a gun

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ammunition projectile 10 embodying a disc 12 . . . [and] includes an elongated cup-shaped *jacket 14* having a closed end 16, an open end 18 and a longitudinal centerline 20. *Commonly this jacket is formed from a metal which exhibits lubricity properties with respect to the lands of the rifling in the barrel of the gun. Copper or an alloy thereof is most frequently used.*" (Emphasis added).

Beal '029 also recites what the Office action calls "core 32." (para. 9, page 4). Applicant's review shows that Beal '029 element 32 recited as "the apex 32 of the deformed disc is disposed adjacent the leading open end 18 of the jacket." (col. 5, lines 8-9). Applicant fails to see how Apex 32 is the same as Applicant's first core.

Beal '029 recites a "core 24" (Office action, para. 9, page 4) in the following context: "when loading the jacket with powder-based *cores 24* in that the core must be formed initially to a lesser diameter than the internal diameter of the jacket adjacent the open end of the jacket, but not materially less than the internal diameter of the jacket at the location along the length thereof where the wall thickness, hence the internal diameter of the jacket, ceases to taper outwardly and upwardly from the closed end of the jacket. This maximum permissible diameter of the core permits the *core 24* to be pressed into that region 22 of the internal volume of the jacket which is associated with the tapering wall thickness without deleterious destruction of the core, and accompanying loss of density of the core and development of void space(s) within the core."

The elements recited in the rejection and noted above are not the same as the elements of claim 24. Furthermore, the rejection does not state any reference to the weights of the first and second cores that are recited in claim 24. Therefore, Beal '029 rejection fails to teach each and every element of claim 24 and Applicant respectfully requests that the rejection be withdrawn.

**3. The following rejections were made under 35 USC 103(a):**

- The Office action at Paragraph 10 states that Claims 25 and 27 are rejected under 35 USC 103(a) as being unpatentable over either Beal '313, Beal '029 or Vaughn.



With respect to Claim 25 which the Office action states is indefinite, Applicant traversed the indefiniteness rejection above and therefore is addressing the 35 USC 103 rejection of claim 25 as it pertains to the originally filed claim. Claim 25 is directed to “[T]he bullet of claim 24 wherein: the first core has deformability effective so that the bullet will not defeat level 2 body armor when impacted thereon,” (emphasis added) and claim 27 is directed to “[t]he bullet of claim 24 wherein: the bullet has a weight of 120-125 grains.” As is noted above with respect to the 35 USC 102 rejections of claim 24 (from which claims 25 and 27 depend), none of the references stated in the present rejection teach each and every element of claim 24. Based upon the reasons given above, Applicant respectfully submits that there is no teaching, suggestion or motivation of Applicants invention of claims 25 or 27 in any of the individual references cited. If, as stated in the Office Action, “it would have been obvious at the time the invention was made to vary the characteristics of the bullet to achieve a desired result,” Applicant respectfully requests that such obvious result and variable characteristics be described in detail in any possible re-application of the present rejection in future Office actions.

For all of the above stated reasons, Applicant respectfully requests that the rejection be withdrawn.

- The Office action at Paragraph 11 states that Claim 26 is rejected Under 35 USC 103(a) as being unpatentable over either Beal ‘313, Beal ‘029 or Vaughn in view of Mravic et al. (hereinafter Mravic).

Claim 26 is directed to “[t]he bullet of claim 24 wherein: the *first core* comprises at least 80.0 weight percent tin; the second core comprises at least 95.0 weight percent *tungsten-filled polymer*; and the jacket comprises at least 50.0 weight percent copper.” (Emphasis added).



The Office action at paragraph 8, page 4 states that "Beal ['313], Beal ['029] and Vaughn are applied as above." Therefore, Applicant relies upon the traversals made above with respect to the application of these references. The Office action further states that the three references "do not disclose a tungsten-filled polymer. Mravic et al. teach a tungsten filled polymer core to be an art recognized equivalent core for a bullet." (Para. 11, page 5). Applicant reviewed the Mravic reference for a "tungsten-filled polymer core" and was unable to find the disclosure stated in the Office action. Moreover, there is no teaching, suggestion or motivation to combine the references to make the substitution suggested in the Office action, para. 11, page 5, that is, "substitute a tungsten filled polymer core for the tungsten core" for a "tungsten-filled polymer core" as recited in the instant claim 26.

For all of the above stated reasons, Applicant respectfully requests that the rejection of claim 26 be withdrawn.

#### **4. Conclusion with respect to 35 USC § 102 and 35 USC § 103 Rejections**

For the above stated reasons, Applicant respectfully requests that claim 24-27 be allowed.



**E. CONCLUSION**

In view of the foregoing amendments to the specification and the remarks, it is respectfully submitted that the claims of this application are now in a condition for allowance and favorable action thereon is requested.

Please apply any credits or charge any deficiencies to our Deposit Account No. 23-1665.

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Respectfully submitted,



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